

# Curriculum Vitae

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## Education

08/1989 - 06/1993 B.S. in Electronics & Communications Engineering from College of Engineering, JMI, New Delhi, India  
08/2000 - 07/2002 M.B.A. in IT & E-Commerce from Illinois Institute of Technology, Chicago, IL  
Ph.D. in Operations Management & Decision Sciences. Dissertation: "Information Sharing and Coordinated Capacity Management in Service Delivery Networks" from Indiana University Kelley School of Business, Bloomington, IN

## Academic Appointments

08/2007 - 07/2012 Assistant Professor of Logistics & Supply Chain Management, University of Houston College of Technology (Houston, Texas)  
08/2012 - 06/2020 Assistant Professor of Anesthesiology, Vanderbilt University (Nashville, Tennessee)  
04/2014 - 06/2017 Assistant Professor Biomedical Informatics, Vanderbilt University (Nashville, Tennessee), Vanderbilt University (Nashville, Tennessee)  
03/2016 - 05/2016 Academic Scholar, Cornell Institute for Healthy Futures (Ithaca, New York)  
03/2016 - Present , Vanderbilt University (Nashville, Tennessee)  
01/2017 - 05/2017 , Vanderbilt University (Nashville, Tennessee)  
07/2017 - 06/2020 Assistant Professor of Biomedical Informatics, Vanderbilt University (Nashville, Tennessee)  
08/2017 - 06/2020 Associate Professor of Owen Graduate School of Management, Vanderbilt University (Nashville, Tennessee)  
10/2017 - 05/2018 , Vanderbilt University (Nashville, Tennessee)  
03/2018 - Present Associate Professor of Anesthesiology, Vanderbilt University (Nashville, Tennessee)  
03/2018 - Present Associate Professor of Biomedical Informatics, Vanderbilt University (Nashville, Tennessee)  
09/2018 - 05/2020 Adjunct Professor of Owen Graduate School of Management, Vanderbilt University (Nashville, Tennessee)  
05/2020 - Present Associate Professor of Biostatistics, Vanderbilt University (Nashville, Tennessee)  
08/2020 - Present Associate Professor of Owen Graduate School of Management, Vanderbilt University (Nashville, Tennessee)

## Other Work Experience

06/1995 - 10/1997 Assistant Manager of Materials, Flex Industries, Ltd. (Noida,India)  
10/1997 - 11/1998 Assistant Manager of International Sales, Flex Industries, Ltd. (Noida,India)  
11/1998 - 07/2000 Supply Chain Analyst and Product Manager, GBC Modi Ltd. (Noida,India)  
07/2001 - 02/2002 Supply Chain Analyst, Global Tech USA Inc. (Schaumburg, Illinois)  
08/2012 - 01/2020 Director of Surgical Business Analytics, Vanderbilt University Hospital, Vanderbilt University Medical Center (Nashville, Tennessee)  
02/2020 - Present Senior Director, Surgical Business Analytics, Vanderbilt University Hospital, Vanderbilt University Medical Center (Nashville, Tennessee)

## Professional Organizations

2020 Association of University Anesthesiologists, Associate Member

## Professional Activities

**Intramural**

08/2012 - Present	Perioperative Executive Committee, Perioperative Services
08/2012 - Present	Surgical Chairs and Chiefs Committee, Anesthesiology

**Extramural**

2005 - Present	Ad-hoc Reviewer for European Journal of Operational Research
2005 - Present	Ad-hoc Reviewer for Health Care Management Science
2007 - Present	Ad-hoc Reviewer for Decision Sciences
2008 - 2009	Healthcare Operations Management Track, Production and Operations Management Society Annual Conference (May 2009), Orlando, Florida, Co-Chair
2008 - Present	Ad-hoc Reviewer for Production and Operations Management
2009 - 2010	Healthcare Operations Management Track, Production and Operations Management Society Annual Conference (May 2010), Vancouver, Canada, Co-Chair
2010 - 2011	Cluster Chair, College of Healthcare Operations, INFORMS Healthcare 2011, Montreal, Canada, Sponsored Cluster Chair
2010 - 2011	College of Healthcare Operations Management, Production and Operations Management Society, VP (Meetings)
2010 - 2011	Healthcare Operations Management Track, Production and Operations Management Society Annual Conference (May 2011), Reno, Nevada, Co-Chair
2011 - 2012	Scheduling Committee, Production and Operations Management Society Annual Conference (April 2012), Chicago, Illinois, Chair
2011 - 2013	College of Healthcare Operations Management, Production and Operations Management Society, President
2011 - Present	Ad-hoc Reviewer for Computers & Operations Research
2012 - 2014	Production and Operations Management Society, Board Member
2012 - 2013	Scheduling Committee, Production and Operations Management Society Annual Conference (May 2013), Denver, Colorado, Chair
2013 - 2014	Scheduling Committee, Production and Operations Management Society Annual Conference (May 2014), Atlanta, Georgia, Chair
2013 - 2014	Healthcare Systems and Medical Informatics Cluster, Institute for Operations Research and Management Science Annual Conference (November 2014), San Francisco, California, Cluster Co-Chair
2013 - 2014	College of Healthcare Operations Management 1-day Conference, Synapse - Applied Healthcare Operations Management and Research Conference (May 2014), Atlanta, Georgia, Organizer
2013 - 2015	College of Healthcare Operations Management, Production and Operations Management Society, President
2013 - Present	Ad-hoc Reviewer for Anesthesia & Analgesia
2013 - Present	Ad-hoc Reviewer for IIE Transactions on Healthcare Systems Engineering
2014 - 2014	Program Committee, Health Systems Optimization Workshop, Center for Engg and Health, Northwestern University; Chicago, IL Sept 2014
2014 - 2015	Synapse - Applied Healthcare Operations Management and Research Conference, Washington D.C., College of Healthcare Operations Management, Production and Operations Management Society
2014 - Present	Ad-hoc Reviewer for Socio-Economic Planning Sciences
2014 - Present	Ad-hoc Reviewer for Journal of Medical Systems
06/2014 - 07/2015	Program Chair, INFORMS Healthcare 2015, Nashville, INFORMS, Program Chair
06/2014 - Present	Ad-hoc Reviewer for Annals of Operations Research
07/2014 - 12/2014	International Advisory Committee, NITIE POMS International Conference 2014
07/2014 - Present	Ad-hoc Reviewer for Journal of Simulation
07/2014 - Present	Ad-hoc Reviewer for Anesthesiology
01/2015 - Present	Ad-hoc Reviewer for Canadian Journal of Anesthesia
03/2015 - Present	Editorial Board for Perioperative Care and Operating Room Management
01/2016 - 12/2016	Health Applications Society, INFORMS, President-Elect, Organized HAS Cluster at INFORMS Nashville Conference 2016
05/2016 - 07/2017	Program Committee, INFORMS Healthcare 2017, Erasmus University, Rotterdam, Advisor
01/2017 - 12/2017	Health Applications Society, Anesthesiology, President
01/2017 - 08/2017	Student Paper Competition Judge, Anesthesiology, Judge
01/2018 - 12/2018	Student Paper Competition Judge, Anesthesiology
01/2020 - 12/2020	Associate Editor for Health Care Management Science

01/2020 - Present	Ad-hoc Reviewer for Management Science
06/2020 - 05/2021	Chair, Best Paper Competition, Anesthesiology, Chair
09/2020 - 08/2025	Section Editor for Health Care Management Science
10/2020 - 10/2021	OR Conference Manager - Program Committee, Anesthesiology, Advisory Committee
04/2021 - Present	Associate Editor for Production and Operations Management
05/2021 - 06/2021	Best Paper Award Committee, Anesthesiology, Supply Chain and Healthcare Conference, Rutgers University NJ, June 2021, Awards Committee

## Teaching Activities

08/2003 - 05/2004	Technology in Business Independent Lab Instructor, Kelley School of Business, Indiana University, Bloomington, Indiana
08/2004 - 12/2006	Operations Management Core Course Discussion Section Instructor, Kelley School of Business, Indiana University, Bloomington, Indiana
08/2007 - 05/2008	Supply Chain Management and Logistics Processes University of Houston, Houston, Texas
08/2007 - 05/2013	Introduction to Logistics Technology University of Houston, Houston, Texas
11/2014 - Present	Predictive Analytics in Healthcare: Healthcare Finance Managers, Remote participation in Q&As
06/2015 - Present	Applied Analytics and Operations Research in a Medical Center: DBMI Summer Seminar Series, Department of Biomedical Informatics
03/2016 - Present	Healthcare Analytics, Instructor, Owen Graduate School of Management, MBA Elective Course taught annually in the Spring semester
01/2017 - Present	Healthcare Operations Management, Instructor, Elective MBA course taught annually in the Fall Semester at the Owen Graduate School of Business
12/2020 - Present	MMHC: Optimizing and Configuring Healthcare Operations, Instructor, Owen Graduate School of Management, Executive Healthcare MMHC course taught annually in the Fall semester over 2 weekends.

## Research Supervision / Mentorship

08/2007 - 05/2008	Divya Tummala University of Houston, Current Position: DevOps Engineer, Apple, Sacramento CA, USA. (Graduate Student, Education)
08/2007 - 05/2008	Grayson Fitch University of Houston, Current Position: Director, Reporting and Analytics, MP2 Energy, Woodlands TX, USA. (Graduate Student, Education)
08/2007 - 05/2008	Ashwin Venkateswaran University of Houston, Current Position: System Design Engineer Level 3, Rockwell Automation, Mumbai India. (Graduate Student, Research)
08/2008 - 05/2009	Gautam Dhadhi University of Houston, Current Position: Performance Improvement Senior Specialist at Hess Corporation, Houston TX, USA. (Graduate Student, Education)
01/2009 - 12/2010	Melissa McWhirter University of Houston, Current Position: Commodity Manager, Emerson, Houston TX, USA. (Undergraduate, Research)
08/2009 - 05/2010	Siddhu Vadakattu University of Houston. (Graduate Student, Education)
08/2009 - 05/2010	Ramya Mandava University of Houston, Current Position: SAP Field Deployment Lead, Schlumberger, Houston TX, USA. (Graduate Student, Education)
01/2010 - 07/2010	Kenneth Peterson University of Houston. (Undergraduate, Research)
01/2010 - 07/2010	Ian Ellis University of Houston, Current Position: 401k Payroll Specialist & Junior Account Manager, AFS316, Houston TX, USA. (Undergraduate, Research)
05/2010 - 05/2010	Arezou Mobasher, Ph.D. University of Houston, Current Position: Sr. Operations Research Consultant, American Airlines, Fort Worth, TX, USA. (Graduate Student, Education)
08/2010 - 05/2011	Melissa Haught University of Houston, Current Position: Classification Manager at National Oilwell Varco, Houston TX, USA. (Graduate Student, Education)
08/2010 - 05/2011	Abhijath Kondragunta University of Houston, Current Position: Test Analyst, UST Global, Bentonville AR, USA. (Graduate Student, Education)
08/2011 - 05/2012	Reshma Kurada, M.S. University of Houston. (Graduate Student, Education)
03/2013 - 09/2013	Rimmert van der Kooij University of Twente, Netherlands, Current Position: Ph.D. candidate, Sintef Trondheim, Norway. (Graduate Student, Education)
08/2013 - Present	Michael J. Ward, M.D., M.B.A. Vanderbilt University Medical Center, Current Position: Assistant Professor of Emergency Medicine, Vanderbilt University Medical Center. (Faculty, General Mentorship)

07/2014 - Present	Maya Yiadom, M.D., M.H.A. Vanderbilt University Medical Center, Current Position: Assistant Professor of Emergency Medicine, Vanderbilt University Medical Center. (Faculty, General Mentorship)
07/2015 - 09/2016	Teus Kappen, M.D., Ph.D. School of Medicine, Vanderbilt University Medical Center, Current Position: Assistant Professor, Anesthesiology, UMC Utrecht, Netherlands. (Post-doc Fellow, Research)
08/2016 - 03/2019	Joonyup Eun, Ph.D. School of Medicine, Vanderbilt University Medical Center, Current Position: Assistant Professor, Graduate School of Management of Technology at Korea University. (Post-doc Fellow, Research)
08/2019 - 12/2019	Austin Triana Vanderbilt University School of Medicine, Current Position: 4th year medical student, Vanderbilt University School of Medicine. (Medical Student, Research)
01/2020 - 05/2021	Yujie Chi Vanderbilt University School of Engineering, Current Position: Graduate Student, Engineering School, Vanderbilt University. (Graduate Student, Research)
06/2020 - 07/2022	Seung Yup Lee Vanderbilt University Medical Center, Current Position: Post-Doc Fellow, Dept. of Anesthesiology, Vanderbilt University Medical Center. (Post-doc Fellow, Research)
09/2020 - Present	Andrew Franklin, M.B.A., M.D. Vanderbilt University School of Medicine, Current Position: Associate Professor. (Faculty, Research)
09/2020 - Present	James Lozada, D.O. Vanderbilt University School of Medicine, Current Position: Assistant Professor. (Faculty, Research)
09/2020 - 01/2021	Leland Dunwoodie Vanderbilt University School of Medicine, Current Position: 3rd year medical school. (Medical Student, Research)

## Other Significant Activities

10/2013	Pre-recorded radio interview and press release: American Society of Anesthesiologists annual meeting (San Francisco, CA) for research "Evaluating Improvements in First Case Start Times Using Process Control Methodologies"
09/2016	Professors Roundtable, Vanderbilt Healthcare Symposium: Owen Graduate School of Management
12/2017	Interviewed and featured as 'one of three worldwide scholars doing simulation based research in healthcare': Brailsford SC, Carter MW, Jacobson SH. Five decades of healthcare simulation. In Simulation Conference (WSC), 2017 Winter 2017 Dec 3 (pp. 365-384). IEEE.
05/2019	Research Showcased: Predictive analytics help manage OR case volume: VUMC Reporter, Paul Govern
10/2019	Quoted & Media Coverage: How Hospitals Use Analytics to Staff Up Before a Rush: Healthcare providers are using data analytics to forecast staffing requirements, which improves care and reduces costs; HealthTechMagazine.Net; Wylie Wong
01/2020	Feature Profile: Mastering predictive modeling to improve patient care: OR Manager Magazine, Elizabeth Wood

## Grants and Funding

Grant number unavailable	2008 - 2012
Michael E deBakey Veterans Affairs Medical Center - Houston	
Improving Operating Room Efficiency	
Recommend solutions for improving measurement and allocation of operating room capacity.	
Role: Principal Investigator	
Total Cost: \$219,000.00	
Grant number unavailable	2010 - 2011
Miertschin S (Co-PI) (PI)	
University of Houston Faculty Development Internal Program	
Using RSS to push course information for enhanced student success	
To evaluate improvement in students' success by delivery course information updates via Rich Site Summary feeds.	
Role: Co-Principal Investigator	
Total Cost: \$12,000.00	
Grant number unavailable	2011 - 2011
Baylor College of Medicine	
Process Mapping and Patient Flow Optimization for Patient-Centered Medical Home	

Evaluate bottlenecks and recommend ideal patient flow as part of the practice transformation effort at Baylor Family Medicine.

Role: Principal Investigator

Total Cost: \$5,000.00

Grant number unavailable Panos Kougias (PI) 2014 - 2018

Veterans Affairs

Using predictive modeling to improve operating room scheduling efficiency at the VA Hospital, Houston, TX

4-year research study to develop and implement statistical and operations research oriented scheduling techniques for operating room management.

Role: Co-Investigator

Total Cost: \$65,000.00

Grant number unavailable Maame Yaa (Maya) Yiadom (PI) 07/2016 - Present

Emergency Medicine Foundation

Improving the Trigger Criteria for an Early ECG to Diagnose STEMI

Evaluating existing criteria for early diagnosis of STEMI patients arriving at the Emergency Department.

Role: Consultant

Grant number unavailable Panagiotis Kougias (PI) 10/2017 - 09/2021

Veterans Affairs

Use of predictive modeling to improve efficiency of the operative suite

System wide implementation of the recommendations that emerged for the pilot study.

Role: Co-Investigator

Grant number unavailable Langerman, Alexander (PI) 01/2019 - 12/2021

Greenwall Foundation

Ethical Analysis of Overlapping Surgery

Patients' perception of overlapping surgery and cost-benefit tradeoffs.

Role: Consultant

Grant number unavailable 08/2019 - 12/2019

Vanderbilt University School of Medicine

Predicting Cardiac Surgery Patients Length of Stay Using Neural Network

Mentor a 3rd year medical school student through the Research Immersion Phase of their curriculum.

Role: Mentor

Total Cost: \$2,000.00

Grant number unavailable 09/2019 - 08/2023

Providing Safe Care to Older Hospitalized Patients through Discrete Event Simulation Modeling

Developing a simulation model of the acute care of the elderly inpatient unit to evaluate impact of staffing levels on care.

Role: Co-Investigator

## Honors / Awards

2006	Doctoral Dissertation Fellowship Award for Life Sciences Research (\$3,000), Kelley School of Business
2006	Panschar Award for Teaching Excellence Nominee, Kelley School of Business
2007	Texas State's Higher Education Assistance Fund Award (\$25,000), The Division of Research, University of Houston
2008	Provost Faculty Travel Fund Award for conference travel, University of Houston
2009	Faculty Mentor Award, University of Houston Honors College, Awarded for mentoring an undergraduate student under the Summer Undergraduate Research Fund program
10/2013	"Predicting Surgical Volume" abstract selected for presentation at Clinical Science Best of Abstracts Session, American Society of Anesthesiologists

03/2014	"Evaluating Improvements in First Case On-Time Starts Using Process Control Methodologies," 1st Place Abstract, Association of Anesthesia Clinical Directors
01/2020	Best in OR Business Award, OR Manager, Managing the OR takes more than just perioperative savvy; it also requires a strong business acumen with the ability to make complex logistical decisions, meet scheduling demands, think strategically, and focus on the bottom line. Each year at the OR Business Management Conference, one inspirational OR business manager or director is honored with the Best in OR Business Award to recognize all the hard work he or she has put into making the business of the OR run smoothly.
05/2021	Best Selling Case Study, Ivey Publishing, Vanderbilt University Medical Center: Elective Surgery Schedule, was a best-seller case study for 2020 in 20th place.

## Publications

### Peer Reviewed Publications

#### Research Articles

1. **Tiwari V**, Venkataraman MA, Gavirneni S. Optimal placement of web proxy servers considering latency in the network. *Decision Sciences Institute Conference Proceedings* 2003.
2. **Tiwari V**, Shunko M. ERP implementation and success measures. *Midwest Decision Sciences Institute Conference Proceedings* 2004.
3. **Tiwari V**, Patterson JH. Multi-mode resource constrained project scheduling considering resource substitutability due to duration and quality. *Decision Sciences Institute Conference Proceedings* 2004.
4. **Tiwari V**, Patterson JH, Mabert VA. Multi-mode resource constrained project scheduling considering resource substitutability due to duration and quality. *International Conference on Project Management and Scheduling Proceedings* 2006.
5. **Tiwari V**, Gavirneni S. Recoupling inventory control research and practice: Guidelines for achieving synergy. *Interfaces* 2007 April;37(2):176-186.
6. **Tiwari V**, Ding D. Service supply chains and customer-need complexity. *Southwest Decision Sciences Institute Conference Proceedings* 2008.
7. **Tiwari V**, Dhodhi G. Procurement decision support tool for determining optimal speed of contracted platform support vessels. *Institute of Supply Management - North American Research and Teaching Symposium Proceedings* 2009.
8. **Tiwari V**, Brethauer KM, Venkataraman MA. Coordinating patient flows in hospitals. *Indian Subcontinent Decision Sciences Institute Conference Proceedings* 2009 January.
9. **Tiwari V**, Patterson JH, Mabert VA. Scheduling projects with heterogeneous resources to meet time and quality objectives. *European Journal of Operational Research* 2009 March;193(3):780-790.
10. **Tiwari V**, Heese HS. Specialization and competition in healthcare delivery networks. *Health Care Manag Sci* 2009 September;12(3):306-324. PMID: 19739362.
11. **Tiwari V**, Ding D. Role of customer-need-complexity on customer satisfaction in service supply chains. *3rd International Conference on Global Interdependence in Decision Science (organized by Administrative College Staff of India) Proceedings* 2009 December.
12. **Tiwari V**. System versus process perspectives of enterprise resource planning implementations. *BVICAM's International Journal of Information Technology* 2010 July;2(2):223-228.
13. **Tiwari V**. Impact of perishable products' inventory policies on the retailer's profits. *Southwest Decision Sciences Conference Proceedings* 2011.
14. Haught M, Kovach JV and **Tiwari V**. Redesigning the SKU creation process using design for six sigma. *Proceedings of the 2012 Industrial and Systems Engineering Research Conference* 2012 January.
15. Koulias P, **Tiwari V**, Orcutt S, Chen A, Pisimisis G, Barshes NR, Bechara CF, Berger DH. Derivation and out-of-sample validation of a modeling system to predict length of surgery. *Am J Surg* 2012 November;204(5):563-568. PMID: 23140826.
16. Koulias P, **Tiwari V**, Barshes NR, Bechara CF, Lowery B, Pisimisis G, Berger DH. Modeling anesthetic times. Predictors and implications for short-term outcomes. *J Surg Res* 2013 March;180(1):1-7. PMID: 23158406.
17. Dexter F, Ledolter J, **Tiwari V**, Epstein RH. Value of a scheduled duration quantified in terms of equivalent numbers of historical cases. *Anesth Analg* 2013 July;117(1):205-210. PMID: 23733843.
18. **Tiwari V**, Dexter F, Rothman BS, Ehrenfeld JM, Epstein RH. Explanation for the near-constant mean time remaining in surgical cases exceeding their estimated duration, necessary for appropriate display on electronic white boards. *Anesthesia and Analgesia* 2013 August;117(2):487-93. PMID: 23780422.

19. **Tiwari V**, Furman WR, Sandberg WS. Predicting case volume from the accumulating elective operating room schedule facilitates staffing improvements. *Anesthesiology* 2014 July;121(1):171-83. PMID: 24940734.
20. **Tiwari V**. Calculating the true cost of robotic hysterectomy. *Healthcare Financial Management: Journal of the Healthcare Financial Management Association* 2014 August;68(8):80-5. PMID: 25145035.
21. Dobie KH, **Tiwari V**, Sandberg WS. "What have we done for us lately?"--Defining performance and value at the individual clinician level. *Anesthesiology Clinics* 2015 December;33(4):659-77. PMID: 26610622.
22. McEvoy MD, Wanderer JP, King AB, Geiger TM, **Tiwari V**, Terekhov M, Ehrenfeld JM, Furman WR, Lee LA, Sandberg WS. A perioperative consult service results in reduction in cost and length of stay for colorectal surgical patients: evidence from a healthcare redesign project. *Perioperative Medicine (London, England)* 2016; 5:3. PMID: 26855773 PMCID: PMC4743367.
23. Koulias P, **Tiwari V**, Berger DH. Use of simulation to assess a statistically driven surgical scheduling system. *The Journal of Surgical Research* 2016 April;201(2):306-12. PMID: 27020812.
24. **Tiwari V**, Sandberg WS. Perioperative bed capacity planning guided by theory of constraints. *Proceedings of the 2016 Winter Simulation Conference* 2016 December;1894-1903.
25. **Tiwari V**, Queenan C, Jacques PS. Impact of waiting and provider behavior on surgical outpatients' perception of care. *Perioperative Care and Operating Room Management* 2017 June;7(June):7-11.
26. Yiadom MYAB, Baugh C, Barrett T, Liu X, Storrow A, Vogus T, **Tiwari V**, Slovis CM, Russ S, Liu D. Measuring emergency department patient population acuity. *Academic Emergency Medicine* 2018 January;65-75. PMID: 28940546 PMCID: PMC5764775.
27. **Tiwari V**, Kumar AB. A novel method for evaluating key success factors in a multifaceted critical care fellowship using data envelopment analysis. *Anesthesia and Analgesia* 2018 January; PMID: 28742779.
28. Wright JP, Edwards GC, Goggins K, **Tiwari V**, Maiga A, Moses K, Kripalani S and Idrees K. Association of health literacy with postoperative outcomes in patients undergoing major abdominal surgery. *JAMA Surgery* 2018 February;137-142. PMID: 28979989 PMCID: PMC5838587.
29. Koulias P, **Tiwari V**, Sharath SE, Garcia A, Pathak A, Chen M, Ramsey D, Barshes NR, Berger DH. A statistical model-driven surgical case scheduling system improves multiple measures of operative suite efficiency: Findings from a single-center, randomized controlled trial. *Annals of Surgery* 2018 April; PMID: 29697450.
30. Eun J, Kim SP, Yih Y, **Tiwari V**. Scheduling elective surgery patients considering time-dependent health urgency: Modeling and solution approaches. *Omega - The International Journal of Management Science* 2018 July;86:137-153.
31. M LeCompte, Wright J, Maiga A, Edwards G, **Tiwari V**, Idrees K. Analysis of 90-day readmission rates and healthcare cost in pancreatic surgery: What if bundled payment systems were applied to pancreatic surgery?. *HPB* 2018 September;20.
32. **Tiwari V**, Ehrenfeld JM, Sandberg WS. Does A first-case-on-time-start initiative achieve its goal by starting the entire process earlier or by tightening the distribution of start times?. *British Journal of Anesthesia* 2018 November;121(5).
33. **Tiwari V**, Quinlan, JJ, Levine, WC. Scaling perioperative services across health care systems. *International Anesthesiology Clinics* 2019 January;57(1):1-17. PMID: 30520745.
34. Jung KS, Pinedo M, Sriskandarajah C, **Tiwari V**. Scheduling elective surgeries with emergency patients at shared operating rooms. *Production and Operations Management* 2019 June;28(6):1407-1430.
35. Hawkins AT, Geiger TM, King AB, Wanderer JP, **Tiwari V**, Muldoon RL, Ford MM, Dmochowski RR, Sandberg WS, Martin B, Hopkins MB, McEvoy MD. An enhanced recovery program in colorectal surgery is associated with decreased organ level rates of complications: a difference-in-differences analysis. *Surgical Endoscopy* 2019 July;33(7):2222-2230. PMID: 30334161.
36. Kistler J, Janakiraman R, **Tiwari V**, Kumar S. The effect of surgical process changes on patient flow: Evidence from field research. *Production and Operations Management* 2020 April.
37. Nassiri AM, Garrett CG, Dail TL, **Tiwari V**, Haynes DS, Rivas A, Langerman AJ. Should I buy this? A decision-making tool for surgical value-based purchasing. *Otolaryngology--Head and Neck Surgery: Official Journal of American Academy of Otolaryngology-Head and Neck Surgery* 2020 April;194599820915194-194599820915194. PMID: 32284008.
38. Youn S, Geismar HN, Sriskandarajah C, **Tiwari V**. Adaptive capacity planning for ambulatory surgery centers. *(Under Review at Manufacturing & Service Operations Management)* 2020 April.
39. Eun J, **Tiwari V**, Sandberg WS. Predicting daily surgical volumes using probabilistic estimates of providers' future availability. *Decision Sciences* 2020 April.
40. Dobie Katherine H, **Tiwari Vikram**, Shi Yaping, Shotwell Matthew S, Sandberg Warren S. Transition from Private to Academic Anesthesia Provision Changes Process and Patient Centered Outcomes in an Ambulatory Surgery Center. *Journal of medical systems* 2020 November;44(12):204-204. PMID: 33161488.

41. Triana Austin J, Vyas Rushikesh, Shah Ashish S, **Tiwari Vikram**. Predicting Length of Stay of Coronary Artery Bypass Grafting Patients Using Machine Learning. *The Journal of surgical research* 2021 March;264:68-75. PMID: 33784585.
42. Hopkins M Benjamin, Hawkins Alexander T, **Tiwari Vikram**, Soda Mosope, Martin Barbara J, Muldoon Roberta L, Ford Molly M, Beck David, Geiger Timothy M. Is newer always better?: comparing cost and short-term outcomes between laparoscopic and robotic right hemicolectomy. *Surgical endoscopy* 2021 June; PMID: 34129087.

### Abstracts

1. Anaya DA, **Tiwari V**, Berger DH. Improving efficiency and productivity in the operation room: Implementing a process flow control system. *J Surg Res* 2012 February;172(2):296.
2. Kumar AB, **Tiwari V**. A novel method of evaluating critical care fellow performance compared to their peers in a busy multifaceted fellowship using data envelopment analysis. *Journal of the Intensive Care Society* 2015 November;16(4(supplement)):73.
3. Kumar AB, Scharfman K, **Tiwari V**. Myasthenic crisis: Epidemiology, economics and outcomes - A single center retrospective analysis. *Critical Care Medicine* 2015 December;43(12 Supplement 1):129-130. PMID: 26570173.
4. Kumar AB, **Tiwari V**. A novel method of evaluating peer to peer performance of critical care fellows using DEA analysis. *Critical Care Medicine* 2015 December;43(12 Supplement 1):59. PMID: 26569892.

### Non-Peer Reviewed Publications

#### Research Papers

1. **Tiwari V**. Learning from the healthcare debate: Need for multidimensional scoping of OM research problems. *Production and Operations Management Society Chronicle* 2009; 16(2):9-10.
2. **Tiwari V**, Sandberg WS. Analytics-based surgical volume predictions improves capacity planning and operations at the Vanderbilt University Medical Center. *Association of Anesthesia Clinical Directors Newsletter* 2014 November;(Oct/Nov 2014):1-3.
3. **Tiwari V**, Sandberg WS. Creating leverage: The roles of operations researchers in academic anesthesiology. *Association of University Anesthesiologists Newsletter* 2015; (Fall 2015):13-14.
4. Mathias JM, **Tiwari V**, Wyatt DA. Data analytics improve odds for predicting surgical case volume. *OR Manager* 2016 March;32(3) PMID: 27012138.

#### Case Reports

1. Cipriano LE, **Tiwari V**, Sandberg WS, Zaric G. Vanderbilt University Medical Center: Elective surgery schedule. *Ivy Publishing Case Studies* 2015 April.

### Presentations

#### Presentations at Scientific Meetings

1. Tiwari V, Venkataraman MA, Gavirneni S. Decision Sciences Institute Annual Conference. Washington, District of Columbia. 2003 Nov; Optimal Placement of Web Proxy Servers Considering Latency in the Network.
2. Tiwari V, Shunko M. Midwest Decision Sciences Institute Conference. Cleveland, Ohio. 2004 Mar; ERP Implementation and Success Measures.
3. Tiwari V. INFORMS Annual Meeting. Denver, Colorado. 2004 Oct; Appointment Scheduling under Revenue Consideration: Simulation Study for a Single Physician Clinic (invited paper in the health applications section).
4. Tiwari V, Patterson JH. Decision Sciences Institute Annual Conference. Boston, Massachusetts. 2004 Nov; Multi-mode Resource Constrained Project Scheduling Considering Resource Substitutability due to Duration and Quality.
5. Tiwari V, Heese HS. INFORMS Annual Meeting. San Francisco, California. 2005 Nov; Service Capacity Competition and Service Networks.
6. Tiwari V, Brethauer KM, Venkataraman MA. Decision Sciences Institute Annual Conference. San Francisco, California. 2005 Nov; Resource Sharing in Service Networks.
7. Tiwari V, Heese HS. INFORMS Annual Meeting. Pittsburgh, Pennsylvania. 2006 Nov; Specialization and Competition in Healthcare Delivery Networks.
8. Tiwari V, Brethauer KM, Venkataraman MA. Service Management Track Decision Sciences Institute. San Antonio, Texas. 2006 Nov; Information Sharing for Coordinated Capacity Management in Service Delivery Networks.

9. Tiwari V, Brethauer KM, Venkataraman MA. Production and Operations Management Society annual conference. Dallas, Texas. 2007 May; Value of Information in Service Networks.
10. Tiwari V, Brethauer KM, Venkataraman MA. Decision Sciences Institute. Phoenix, Arizona. 2007 Nov; Resource Flexibility and Information Sharing for Patient-Flow Coordination.
11. Tiwari V, Heese HS. Production and Operations Management Society Annual Conference. La Jolla, California. 2008 May; Specialization and Competition in Healthcare Delivery Networks.
12. Tiwari V, Brethauer KM, Venkataraman MA. Decision Sciences Institute. Baltimore, Maryland. 2008 Nov; Value of Information and Capacity Flexibility in Healthcare Delivery.
13. Tiwari V, Brethauer KM, Venkataraman MA. Indian Subcontinent Decision Sciences Institute. Mumbai, India. 2009 Jan; Coordinating Patient Flows in Hospitals.
14. Tiwari V, Brethauer KM, Venkataraman MA. Production and Operations Management Society Annual Conference. Orlando, Florida. 2009 May; Coordinating Hospital Capacity through Information Sharing.
15. Tiwari V, Ding D. Decision Sciences Institute Annual Conference. New Orleans, Louisiana. 2009 Nov; Complexity of Customer Needs as a Determinant of the Collaboration Effort Required in Service Supply Chains.
16. Tiwari V, Ding D. 3rd International Conference on Global Interdependence in Decision Science (organized by Administrative College Staff of India). Hyderabad, India. 2009 Dec; Role of Customer-Need-Complexity on Customer Satisfaction in Service Supply Chains.
17. Tiwari V, Berger D, Ehni B, Kougias P. International Conference on Systems Analysis Tools for Better Health Care Delivery: A New Engineering Health Care Partnership. Gainesville, Florida. 2010 Mar; Developing Daily Surgery Schedules Based on Probability Distribution of Surgical and Anesthesia Case Durations.
18. Tiwari V, Berger D, Ehni B, Kougias P. Production and Operations Management Society Conference. Vancouver, Canada. 2010 May; Using Estimates of Surgical and Anesthesia Case Durations for Creating Day-of-Surgery Schedules.
19. Tiwari V, Berger D. Production and Operations Management Society. Vancouver, Canada. 2010 May; Operating Room Efficiency Improvement Project – a Collaborative Effort between Houston's Veterans Affairs Hospital and the University of Houston.
20. Tiwari V, Berger D. INFORMS Healthcare Conference. Austin, Texas. 2010 Nov; Elective Surgery Scheduling.
21. Tiwari V, Berger D. Decision Sciences Annual Conference. San Diego, California. 2010 Nov; Operating Room Scheduling Using Probabilistic Estimates of Surgery-Times.
22. Tiwari V, Groznik A. INFORMS Healthcare Conference. Austin, Texas. 2010 Nov; Incentive Games in Healthcare Delivery – Pay-For-Performance in Primacy Care.
23. Tiwari V. Southwest Decision Sciences Institute Conference. Houston, Texas. 2011 Mar; Impact of Perishable Products' Inventory Policies on the Retailer's Profits.
24. Tiwari V, Anaya D, Berger D. Annual Meeting of the Association of VA Surgeons. Irvine, California. 2011 Apr; Implementation of Process Flow Control in the Operating Room.
25. Kougias P, Pismiris G, Tiwari V, Weakley S, Bechara C, Berger D. Annual Meeting of the Association of VA Surgeons. Irvine, California. 2011 Apr; Predicting the Unpredictable. Is It Possible to Model the Time Length of an Operative Intervention?.
26. Tiwari V, Kougias P. Production and Operations Management Society conference. Reno, Nevada. 2011 May; Identifying Predictors of Vascular Surgery Case Durations.
27. Tiwari V, Berger D. INFORMS Healthcare Conference. Montreal, Canada. 2011 Jun; Improvement in Day-of-Surgery Operations After Implementation of a Real-time Patient Tracking System.
28. Tiwari V, Berger D. Mayo Clinic Conference on Systems Engineering and Operations Research. Rochester, Minnesota. 2011 Aug; Real Time Flow Control in the Operating Room.
29. Tiwari V, Groznik A. INFORMS Conference. Charlotte, North Carolina. 2011 Nov; Incentives for Improvement of Patients' Health in Primary Care.
30. Tiwari V, Kougias P, Barsches NB, Lin PH, Bechara CF. 7th Academic Surgical Congress. Las Vegas, Nevada. 2012 Feb; Modeling Anesthetic Times. Predictors and Implications for Short Term Outcomes.
31. Tiwari V, Berger D. Production and Operations Management Society conference. Chicago, Illinois. 2012 Apr; Operating Room Efficiency Improvement with Real-Time Information Sharing.
32. Tiwari V, Brethauer KM, Venkataraman MA. INFORMS Conference. Phoenix, Arizona. 2012 Oct; Role of Demand Variability, Information Sharing & Resource Flexibility in Coordinating Patient Flow.
33. Tiwari V, Ehrenfeld JM, Sandberg WS. Production and Operations Management Society Conference. Denver, Colorado. 2013 May; Improving and Sustaining On-Time Case Starts at Operating Rooms.
34. Dakin B, Tiwari V. Production and Operations Management Society Conference. Denver, Colorado. 2013 May; Influence of Volume and Service-Mix Variability on Operating Rooms Supply Costs.

35. Tiwari V, Rothman B. Production and Operations Management Society Conference. Denver, Colorado. 2013 May; Key Marker Identification for Real-Time Updating of Surgical Case End Time.
36. O'Neill L, Tiwari V, Tucker A. Production and Operations Management Society conference. Denver, Colorado. 2013 May; The Happy Hospital: The Influence of Hospital Design and Nurse Staffing on Patient Satisfaction.
37. Tiwari V, Furman WR, Sandberg WS. American Society of Anesthesiologists Annual Meeting. San Francisco, California. 2013 Oct; Predicting Surgical Volume.
38. Tiwari V, Ehrenfeld JM, Sandberg WS. American Society of Anesthesiologists Annual Meeting. San Francisco, California. 2013 Oct; Evaluating Improvements in First-Case-On-Time-Starts Using Process Control Methodologies.
39. Tiwari V, Furman WR, Sandberg WS. American Association of Clinical Directors Perioperative Leadership Summit. Nashville, Tennessee. 2014 Mar; Daily Surgical Volume Predictions: Theory to Implementation.
40. Tiwari V. Association of Academic Surgery Administrators South-East Regional Retreat. Nashville, Tennessee. 2014 Apr; Using Analytics and Modeling to Add Value to the OR.
41. Tiwari V, Sandberg WS. Association of University Anesthesiologists 61st Annual Meeting. Stanford, California. 2014 Apr; Using Providers' Self-Reported Time Away Information to Predict Daily Surgical Service Volume Months in Advance.
42. Tiwari V, Furman WR, Sandberg WS. Production and Operations Management Society Annual Conference. Atlanta, Georgia. 2014 May; Operating Room Planning.
43. Tiwari V, Sandberg WS. Canadian Operational Research Society Conference. Ottawa, Canada. 2014 May; Short and Long-Range Predictions of Operating Room Case Volume.
44. Koulias P, Tiwari V, Berger D. Health Systems Optimization Workshop. NSF; Center for Engineering & Health, Northwestern University; 2014 Sep; Inception and Design of a Randomized Trial to Study the Impact of Case-Specific Operative Time Prediction on Operating Room Productivity.
45. Tiwari V. American Society of Anesthesiologists. New Orleans, Louisiana. 2014 Oct; Using Providers' Self Reported Time Away Information to Predict Daily Surgical Service Volume Months in Advance.
46. Tiwari V. INFORMS Annual Meeting. San Francisco, California. 2014 Nov; Predicting Daily Surgical Service Volume Using Provider-Away Information.
47. Tiwari V. American Association of Clinical Directors Perioperative Leadership Summit. Las Vegas, Nevada. 2015 Mar; Using Long-Term Provider-Availability-Data to Predict Daily Surgical Service Volume.
48. Tiwari V, Kumar AB. Association of University Anesthesiologists. Nashville, Tennessee. 2015 Apr; Evaluating Peer-to-Peer Performance of Anesthesiology Critical Care Fellows Using Data Envelopment Analysis: A Case Study.
49. Koulias P, Tiwari V. Production and Operations Management Society. Washington DC2015 May; A Novel Approach for Operating Room Scheduling.
50. Tiwari V. IIE Annual Conference and Expo. Nashville, Tennessee. 2015 Jun; Models for Predicting Daily Surgical Case Volume.
51. King A, Wanderer J, Geiger T, Tiwari V, Sandberg WS, McEvoy M. Anesthesiology 2015 (Annual Meeting). American Society of Anesthesiologists; San Diego, California. 2015 Oct; Effect of Ongoing Process Improvement on an Enhanced Recovery After Surgery.
52. McEvoy M, King A, Spann MD, Tiwari V, Sandberg WS, Wanderer J. Anesthesiology 2015 (Annual Meeting). American Society of Anesthesiologists; San Diego, California. 2015 Oct; Effect of Implementing an Enhanced Recovery After Surgery (ERAS) Pathway Via.
53. Tiwari V, Sandberg WS. American Society of Anesthesiologists Annual Meeting. San Diego, California. 2015 Oct; Simulation Modeling Informs Pre & Post-Op Bed Allocation.
54. Tiwari V, Kumar AB. Institute for Operations Research and Management Sciences. Philadelphia, Pennsylvania. 2015 Nov; Evaluating Peer-to-Peer Performance of Anesthesiology Fellows using Data Envelopment Analysis.
55. Sharath S, Pathak A, Garcia A, Chen M, Barshes NR, Ramsey D, Tiwari V, Berger D, Koulias P. Association of VA Surgeons. Veterans Affairs; Virginia Beach, Virginia. 2016 Apr 10; A Data-Driven Surgical Case Scheduling System Improves Multiple Measures of Operative Suite Efficiency. Results of a Randomized Controlled Trial.
56. Jung KS, Pinedo M, Sriskandarajah C, Tiwari V. Production and Operations Management Society. Orlando, Florida. 2016 May; Scheduling Operating Rooms with Elective and Emergent Surgeries.
57. Jung KS, Pinedo M, Sriskandarajah C, Tiwari V. INFORMS Annual Meeting. Nashville, Tennessee. 2016 Nov; Scheduling Operating Rooms with Elective and Emergency Surgeries.
58. Tiwari V, Sandberg WS. Simulating Complex Service Systems. Winter Simulation Conference, INFORMS; Washington DC, District of Columbia. 2016 Dec; Perioperative Bed Capacity Planning Guided by Theory of Constraints.
59. Maiga AW, Kummerow BK, Tiwari V, Solorzano CC, Roumie CL, Patel MB. Association of VA Surgeons, 41st Annual Surgical Symposium. Houston, Texas. 2017 May; Predicting Operative Time for Elective Outpatient Surgery.

60. Eun J, Tiwari V, Sandberg WS. 28th Annual Conference. Production and Operations Management Society; Seattle, Washington. 2017 May; A Method to Predict Day-of-Surgery Case Volume Months in Advance.
61. Eun J, Tiwari V, Breidenstein M, Sandberg WS, Tsai MH. International Anesthesia Research Society. Washington D.C., District of Columbia. 2017 May; Optimal Algorithm for Assignment of Anesthesiologists to Non-Operating Room Sites.
62. Kistler J, Janakiraman R, Tiwari V, Kumar S. 28th Annual Conference. Production and Operations Management Society; Seattle, Washington. 2017 May; Analyzing Impact of Surgical Process Changes on Patient Flows: Evidence from Field Research.
63. Eun J, Tiwari V, Sandberg WS. INFORMS Healthcare 2017. Rotterdam, Netherlands. 2017 Jul; Evaluating Usefulness of Information Quality in Predicting Daily Surgical Volume.
64. Eun J, Tiwari V, Sandberg WS. INFORMS. Houston, Texas. 2017 Oct; Is More Information Always Better in Predicting Daily Surgical Case Volume?.
65. LeCompte MT, Wright JP, Maiga AW, Edwards GC, Tiwari V, Idress K. Annual Americas Hepato-Pancreato-Biliary Congress. Miami, Florida. 2018 Mar; Analysis of 90-day Readmission Rates and Healthcare Cost in Pancreatic Surgery: What if Bundled Payment System were Applied to Pancreatic Surgery?.
66. Eun J, Tiwari V, Breidenstein MW, Sandberg WS, Tsai MH. Production and Operations Management Society. Houston, Texas. 2018 May; Assignment of Anesthesiologists to Non-Operating Room Sites.
67. Youn S, Sriskandarajah C, Tiwari V. Production and Operations Management Society. Houston, Texas. 2018 May; Capacity Planning for Ambulatory Surgery Centers.
68. Tiwari V, Kumar AB. INFORMS International. Taipei, Tennessee, Taiwan. 2018 Jun; Evaluating Key Factors for Success in a Critical Care Fellowship Program using Data Envelopment Analysis.
69. Eun J, Tiwari V, Tsai MH, Breidenstein MW, Sandberg WS. INFORMS Annual Conference. Phoenix, Arizona. 2018 Oct; Integrated Routing and Scheduling of Anesthesiologists to Off-Locations.
70. Youn S, Sriskandarajah C, Tiwari V. Decision Sciences Institute Annual Meeting 2018. Decision Sciences Institute; Chicago, Illinois. 2018 Nov; Adaptive Capacity Planning for Ambulatory Surgery Centers.
71. Tiwari V, Penson D, Sandberg WS. Academic Surgical Congress Annual Meeting 2019. Academic Surgical Congress; Houston, Texas. 2019 Feb 5; Using Data Envelopment Analysis for Improving Allocation of Operating Room Capacity among Surgeons.
72. Hu K, Tiwari V. Production and Operations Management Annual Meeting. POMS; Washington D.C., District of Columbia. 2019 May; Understanding Standardization in Hospital Settings.
73. Tiwari V. INFORMS Healthcare 2019. INFORMS; Boston, Massachusetts. 2019 Jul 27; Operating Rooms' Turnover Process Redesign Through Improved Staff Capacity Planning Guided by Queuing Models.
74. Tiwari V, Penson D, Sandberg WS. Decision Sciences Institute Annual Conference. New Orleans, Louisiana. 2019 Nov 23; Allocation of Operating Room Block Capacity among Surgeons using Data Envelopment Analysis.
75. Tiwari V., Narayanan S, Pendem P. Informs Annual Meeting. Virtual2020 Nov 10; Learning in Robotics Surgeries: a Field Study.
76. Triana A., Vyas R., Shah A., Tiwari V. Informs Annual Meeting. Virtual2020 Nov 10; Predicting Length of Stay After Coronary Artery Bypass Surgery Using Machine Learning.
77. Lee S., Tiwari V. Informs Annual Meeting. Virtual2020 Nov 10; Optimal Release of Future Operating Room Capacity.
78. Chi Y., Tiwari V. Decision Science Institute Annual Meeting. Virtual2020 Nov 22; Stochastic Model for Surgical Volume Growth Planning.
79. Triana A., Vyas R., Shah A., Tiwari V. Society of Thoracic Surgeons Annual Meeting. 2021 Jan 29; Predicting Length of Stay of Coronary Artery Bypass Grafting Patients Using Machine Learning.
80. Tiwari V. Association of Anesthesia Clinical Directors. Virtual2021 Mar 19; Applications of Queuing, Simulation, and Predictive Modeling in the COVID-19 Pandemic Era.
81. Hu K, Liang Y, Tiwari V. 2021 Annual Conference Production and Operations Management. 2021 May 4; Standardization on Healthcare Delivery.
82. Lee S, Tiwari V. 2021 Annual Conference Production and Operations Management. 2021 May 4; Optimal Release of OR Capacity.
83. Lee S, Narayanan S, Tiwari V. 2021 Annual Conference Production and Operations Management. 2021 May 4; Impact of Intra-system Information Transfer on Hospital Performance.
84. Tiwari V, Narayanan S. 2021 Annual Conference Production and Operations Management. 2021 May 5; Does the Time-of-the-Day Surgery was Performed Impact Cardiac Surgery Patients' Outcomes?.
85. Tiwari V. Post-Pandemic Supply Chains and Healthcare Management. 2021 Jun 3; Applying Operations Research for Hospital Capacity Management during COVID-19 Pandemic, and the Lessons for the Post-Pandemic Period.

### **Invited Presentation - Local**

1. Tiwari V. Council of Supply Chain Management Professionals - Houston Chapter. Houston, Texas. 2008 Nov; Applying Supply Chain Concepts in Healthcare.
2. Tiwari V. Houston VA Hospital; Houston, Texas. 2009 Jul; Surgical Time Estimation.
3. Tiwari V, Berger D. VA HSR&D Center of Excellence; Houston, Texas. 2010 Apr; Increasing Operating Room Efficiencies with Systems Engineering; a MEDVAMC & UH Collaboration.
4. Tiwari V, Berger D. VA Implementation Conference. Houston, Texas. 2011 Sep; Role of Systems Engineering in Intervention Research.
5. Tiwari V, Sanders B. Quarterly Multidisciplinary Perioperative Morbidity, Mortality & Improvement Conference. Vanderbilt University Medical Center; Nashville, Tennessee. 2016 Dec 2; Turnover Time Improvement.
6. Tiwari, V. Urologic Surgery Seminar. Urology Department; Nashville, Tennessee. 2018 Jul; Perioperative Capacity Planning and Management.
7. Tiwari V. Class Lecture - Visiting Professor. Department of Health Policy; Nashville, Tennessee. 2020 Mar 19; Hospital Capacity Management: applications of queuing and simulation.
8. Tiwari V. Class Lecture - Visiting Professor. Department of Health Policy; Nashville, Tennessee. 2021 Mar 25; Application of Operations Research and Epidemiological Models during COVID-19 Pandemic.

### **Invited Presentation - Regional**

1. Tiwari V, Berger D. Mayo Clinic; Rochester, Minnesota. 2010 Nov; Operation Room Efficiency, an Oxymoron?.
2. Tiwari V. Monthly Informatics Research Seminar. Vanderbilt University Medical Center Department of Anesthesiology; Nashville, Tennessee. 2011 Aug; Surgery Scheduling Based on Probabilistic Estimates of Case Duration Times.
3. Tiwari V. Mayo Clinic Conference on Systems Engineering. Rochester, Minnesota. 2011 Aug; Healthcare and Operations Management.
4. Tiwari V. Center for Healthcare Engg. and Patient Safety, University of Michigan; Ann Arbor, Michigan. 2017 Jul; Managing Perioperative Capacity: Applied research projects.

### **Invited Presentation - National**

1. Tiwari V. Innovations in Healthcare Delivery Conference. Cincinnati, Ohio. 2008 Oct; Improving Operating Room Efficiency: A brief Introduction to Multi-Year Research Grant.
2. Tiwari V, Sandberg WS. Health Systems Optimization Workshop. NSF; Center for Engineering & Health Northwestern University; Chicago, Illinois. 2014 Sep; Predicting Day-of-Surgery Case Volume.
3. Tiwari V, Wyatt DA. OR Managers. Long Beach, California. 2014 Sep; It's all About the Data: How Advanced Data Analytics Will Help your Department Shine.
4. Tiwari V, Strech S. University Health Systems Consortium Annual Conference. University Health Systems Consortium; Las Vegas, Nevada. 2014 Oct; Data Analytics Helps Demystify Variability in Monthly Surgical Supply Costs.
5. Tiwari V. Healthcare Conference: Patient-Centric Healthcare Management in the Age of Analytics. Kelley School of Business, Indiana University; Bloomington, Indiana. 2015 Oct; Experiments Towards Dynamic Reallocation of Surgical Block Capacity.
6. Tiwari V, Wyatt DA. OR Manager Conference. Nashville, Tennessee. 2015 Oct; Developing and Sustaining Successful Outcomes from Analytics Projects.
7. Tiwari V. 4th Rutgers Applied Probability Conference: Analytic Methods in Health Care and in Clinical Trials. Rutgers Business School; New Brunswick, New Jersey. 2015 Oct; Probabilistic Operational Decision Making in Healthcare: 3 Applied Research Projects.
8. Wyatt DA, Tiwari V. Executive Summit: Association of Operating Room Nurses Conference. Anaheim, California. 2016 Apr; Analytics: Asking the Right Questions.
9. Tiwari V, Wyatt DA. OR Manager Conference. Las Vegas, Nevada. 2016 Oct; Embedding Analytical Thinking into Perioperative Operations.
10. Tiwari V, Wyatt DA. Executive Leadership Summit. Association of Operating Room Nurses Conference; Boston, Massachusetts. 2017 Apr 3; Choosing the Right Operations Management Principle and Analytical Approach.
11. Tiwari V. Perioperative Leadership Summit. Association of Anesthesia Clinical Directors; New Orleans, Louisiana. 2018 Mar; Queueing and Empirical Modeling of Waiting Times and Impact on Patient's Perception of Care.

### **Invited Presentation - International**

1. Tiwari V. OR Business Managers Conference. OR Manager; Weston, Florida. 2020 Jan 30; Power and Perils of Data Analytics.

## **Other**

1. Tiwari V. Sinopec USA, Inc.; Houston, Texas. 2007 Nov; IT Applications in Logistics and Supply Chain Management (Presentation to Executives).
2. Tiwari V. Houston, Texas. 2008 Jan; Presented to the President and the Chancellor of the University of Houston on her visit to the College of Technology. The presentation included a poster presentation about the federally funded ongoing healthcare efficiency project.
3. Tiwari V, Doddapanneni R, Vadakatu S. Memorial Hermann Southwest Hospital. Houston, Texas. 2010 Apr; Improving Effectiveness of Automatic Supply Dispensing Systems at the Operating Rooms (presentation of research report/proposal).

## **Internal Grand Rounds**

1. Tiwari V, Kingeter A. Perioperative Morbidity & Mortality Improvement Conference. Vanderbilt University Medical Center; Tennessee. 2018 Jun; OR/Surgery Costs.
2. Tiwari V. Seminar: Health Policy Department, School of Medicine. Vanderbilt University Medical Center; Nashville, Tennessee. 2020 Feb 20; Applying Operations Research for Hospital Capacity Planning and Management.
3. Tiwari V. Department of Anesthesia, Vanderbilt University Medical Center; Nashville, Tennessee. 2020 May 15; Modeling for Surgical Case Volume in the COVID Era and Beyond.
4. Tiwari V. Advanced Practice Leadership Board. Vanderbilt University Medical Center; Nashville, Tennessee. 2020 Aug 27; Predictive Modeling for COVID-19 Patients Census at VUMC.
5. Tiwari V. Adult Enterprise Nursing Leadership Board Meeting. Vanderbilt University Adult Hospital; Nashville, Tennessee. 2021 Jan 28; COVID-19 Patients Census Prediction for VUAH.

## **Panel Presentation**

1. Tiwari V. Decision Sciences Institute. Washington D.C., District of Columbia. 2017 Nov; Lean in Healthcare.
2. Tiwari V. Decision Sciences Institute Annual Meeting 2018. Decision Sciences Institute; Chicago, Illinois. 2018 Nov 18; Data Analytics in Healthcare.
3. Tiwari V. Informs Annual Meeting. Virtual2020 Nov 11; Meet the Editors.

## **University Talk**

1. Tiwari V. Regenstrief Center for Healthcare Engineering, Purdue University; West Lafayette, Indiana. 2016 Oct 12; Applied Analytics for Operating Rooms Capacity Management.
2. Tiwari V. New York University, Stern School of Business; New York, New York. 2017 Apr 28; Capacity Planning and Management in Healthcare: Applied Research Projects.
3. Tiwari V. Seminar. University of Houston; Houston, Texas. 2019 Feb 5; Perioperative Capacity Planning and Management: Applied Research Projects.
4. Tiwari V. University of North Texas; 2021 Apr 16; Converting Practical Healthcare Projects into Academic Publications.